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- 10. The material as defined in claim 1, wherein the polycrystalline gallium-containing group III metal nitride material has a porosity from about 10 percent to about 30 percent by volume.
- 11. The material as defined in claim 1, wherein each of the plurality of grains is characterized by an average grain diameter in a range of from about 1 millimeter to about 10 micrometers.
- 12. The material as defined in claim 1, wherein the plurality of grains is characterized by an average grain diameter greater than about 1.0 micrometer. 10
- 13. The material as defined in claim 1, wherein the polycrystalline gallium-containing group III metal nitride material is characterized by an apparent density in a range of from about 85 percent to about 95 percent of a theoretical value.
- 14. The material as defined in claim 1, wherein the atomic fraction of the gallium-containing group III metal in the crystalline gallium-containing group III metal nitride is in a range of from about 0.50 to about 0.51.

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- 15. The material as defined in claim 1, wherein the crystalline gallium-containing group III metal nitride comprises one or more dopants to provide one or more of an n-type material, a p-type material, or a semi-insulating material.
- 16. The material as defined in claim 15, wherein the one or more of an n-type material, a p-type material, or a semi-insulating material is characterized by a dopant concentration in a range of from about 10^{21} atoms per cubic centimeters to about 10^{16} atoms per cubic centimeters.
- 17. The material as defined in claim 1, wherein the polycrystalline gallium-containing group III metal nitride material has an inter-grain bend strength greater than about 20 MegaPascal.
- 18. The material as defined in claim 1, wherein the plurality of inclusions comprise a material selected from a metal, a metal nitride, a metal halide, a metal oxynitride, a metal oxyhalide, a metal oxide, and a combination of any of the foregoing.

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